What is claimed is:

1.   A method for communicating between computers
interconnected by a communications network, the method
comprising the steps of:

5   (a)   receiving, at a deriving computer, a request from a
            client for transmission to the client of a user-
            selected version of a target file, the target file
            having particular informational content independent
            of its embodiment in a particular version;

10   (b)   deriving by conversion the user-selected version
            from a materialized file from which the user-
            selected version is derivable if the user-selected
            version is not accessible to the deriving computer;

            (c)   transmitting, from the deriving computer to the

15   client, the user-selected version.

2.   The method set forth in claim 1, wherein the
deriving computer is a server.

3.   The method set forth in claim 1, wherein the
20   deriving computer is a proxy interconnecting the client to a
server.

4.   The method set forth in claim 1, wherein the user-
selected version is derived in step (b) from a parent file
resident at the deriving computer.

5.   The method set forth in claim 1, further comprising the step of:

(d)   transmitting from the deriving computer to a server, responsive to receiving the request in step (a), a request for transmission to the deriving computer of a materialized parent file from which the user-selected version may be derived by conversion, step (d) being performed before step (b).

6.   The method set forth in claim 5, further comprising the step of:

(e)   transmitting, from the deriving computer to the client, a program for generating a menu of user-selectable versions of the target file, step (e) being performed before step (a).

7.   The method set forth in claim 6, further comprising the steps of:

(f)   receiving, at the deriving computer, a file responsive to a request for transmission of the file originating from the client;

(g)   deriving, at the deriving computer, a default, low resolution, version of the file, the default, low resolution version being transmitted to the client responsive to the client's request for transmission of the file, steps (f) and (g) being performed before step (e), the menu generation program transmitted in step (e) being transmitted along with the default, low resolution version.

8.   The method set forth in claim 7, further comprising the step of:

(h)   generating a menu of user-selectable versions of the target file, the menu being generated by the menu generation program as determined by the versions materialized on the server and the versions derivable therefrom by the conversion software available to the deriving computer, step (h) being performed before step (a).

9.   A method for communicating between a client and a server interconnected to the client by a communications network, the method comprising the steps of:

(a)   requesting, at the client, transfer of a target file having particular informational content;

(b)   displaying, at the client, in response to the request, a menu of user-selectable versions of the target file;

(c)   transmitting a request, from the client, indicating a user-selected version selected from the menu; and

(d)   receiving, at the client, in response to the transmission of the selection, the user-selected version of the file.

10.   The method set forth in claim 9 wherein the method further comprises the steps of:

(e)   determining whether the user-selected version of the file is resident in a memory cache on a computer in

the communications network, step (e) being performed

intermediate steps (c) and (d); and

(f)   transmitting the user-selected version of the file

from the cache to the client if the user-selected

5   version is resident in the cache.

11.   The method set forth in claim 10 wherein the cache

is maintained on the server.

12.   The method set forth in claim 10 wherein the client

and server are connected by a proxy for relaying a

10   communication from a sender to a receiver and wherein the

cache is maintained on the proxy.

13.   The method set forth in claim 12 wherein the method

further comprises the steps of:

(g)   requesting, at the client, transfer of a parent file

15   to the client;

(h)   receiving, at the proxy, a materialized version of

the parent file responsive to the client's request;

and

(i)   deriving, at the proxy, a default, low resolution,

20   version of the parent file, the low resolution

version being transmitted to the client responsive

to the request for transfer of the parent file,

steps (g) (h) and (i) being performed before step

(a).

14.   The method set forth in claim 13 wherein the proxy
transmits a program for generating the menu of user-selectable
versions to the client along with the default, low resolution
version transmitted to the client in step (i).

5   15.   The method set forth in claim 14 wherein step (b)
further comprises the step of:

       generating at the client, a menu of user-selectable
       versions of the file.

16.   The method set forth in claim 15 wherein the method
further comprises the steps of:

(j)   determining if the user-selected version of the file
     is resident in the cache;

(k)   transmitting the user-selected version to the proxy
     if it is resident in the cache;

(l)   determining whether the user-selected version of the
     file can be derived by conversion from any version
     of the file resident in the cache; and

(m)   deriving the user-selected version of the file from
     a version resident in the cache if the user-selected
20   version can be so derived.

17.   The method set forth in claim 16 wherein step (m) is
performed at the proxy.

18.   The method set forth in claim 16 wherein the method
further comprises the step of:

(n)   requesting transmission from the server of a
materialized version of the file from which the
user-selected version may be derived, if the user-
selected version cannot be derived from a version

5   resident in the cache.

19.   The method set forth in claim 18 wherein the method
further comprises the step of:

(o)   receiving the materialized version at the proxy.

20.   The method set forth in claim 19 wherein the request

10   for the file in step (a) comprises a universal resource
locator for a file and information identifying a version of
the file.

21.   The method set forth in claim 20 wherein the program
for generating the menu of user-selectable versions is written

15   in the Javascript programming language.

22.   The method set forth in claim 21 wherein the file is
requested in step (a) by selecting a hyperlink.

23.   The method set forth in claim 22 wherein the user-
selected version is selected from the menu in step (c) by

20   selecting a hyperlink.

24.   The method set forth in claim 23 wherein the cache
management technique employs an ignore heuristic to manage the

identity of the files resident in the cache in which the cache

does not store versions which are derivable from other

versions resident in the cache.

25.   The method set forth in claim 23 wherein the cache

employs a save heuristic in which all derived versions are

store in the cache, to manage the identity of the files

resident in the cache.

26.   The method set forth in claim 24 wherein the cache

determines whether a version resident in the cache is a

current version of the target file and requests a current

version of the target file if the version resident in the

cache is not a current version.

27.   A method of communication of a user-selected version

of a file to a client connected to a server by a

communications network, a version of the target file being

materialized on the server, the method comprising the steps

of:

   (a)   selecting, at the client, a single point of access

         to a target file having particular informational

         content to initiate transmission of a version of the

         file to the client;

   (b)   generating, at the client, a menu of user-selectable

         versions of the target file, each user-selectable

         version being either materialized on the server or

         derivable from a materialized version;

(c)   selecting, at the client, a user-selected version of
      the target file from the menu; and

(d)   receiving, at the client, the user-selected version
      of the target file.

28.   The method set forth in claim 27 wherein a proxy for
relaying communications between the client and the server
connects the client to the server and wherein the proxy
transmits menu-generation information to the client.

29.   The method set forth in claim 28 wherein the proxy
transmits the menu-generation information to the client along
with a file transmitted from the proxy to the client.

30.   The method set forth in claim 29 wherein the client
generates the menu of user-selectable versions in step (b)
from the menu-generation information.

31.   The method set forth in claim 30 wherein the menu of
user-selectable versions of the file comprises a selection for
a materialized version of the target file and a selection for
a version of the target file derivable from the materialized
version by conversion.

32.   The method set forth in claim 31 wherein the menu of
user-selectable versions of the target file further comprises
selections for a plurality of materialized versions of the
target file.

33.   The method set forth in claim 32 wherein the proxy comprises a memory cache for storage of files and wherein the method further comprises the step of:

(e)   transmitting the user-selected version of the target

5   file from the proxy to the client if the user-selected version is in the cache, step (f) being performed intermediate steps (c) and (d).

34.   The method set forth in claim 33 wherein the method further comprises the step of:

(f)   deriving the user-selected version of the target

10   file from a version of the target file resident in the cache if the user-selected version can be derived from a version resident in the cache by conversion, step (f) being performed intermediate

15   steps (e) and (d).

35.   The method set forth in claim 34 wherein the method further comprises the step of:

(g)   requesting and receiving a materialized version of the file at the proxy if the user-selected version

20   of the file is not resident in the cache and is not derivable from a version resident in the cache, step (g) being performed intermediate steps (f) and (d).

36.   The method set forth in claim 35 wherein the method further comprises the step of:

(h)   transmitting the materialized version of the target

file to the client if the user-selected version is

the materialized version, step (h) being performed

intermediate steps (g) and (d).

5   37.   The method set forth in claim 36 wherein the method

further comprises the step of:

(i)   deriving the user-selected version of the file from

the materialized version of the target file by

conversion and transmitting the user-selected

10   version of the target file to the client, if the

user-selected version is derivable from the

materialized version, step (i) being performed

intermediate steps (h) and (d).

38.   The method set forth in claim 37 wherein the single

15 point of access is a hyperlink displayed at the client.

39.   A client computer for displaying a menu of user-

selectable versions of a target file upon selection of a

hyperlink to the target file, the client computer comprising:

a program for generating a menu; and

20   a program for transmitting a selection selected from

the menu indicating a user-selected version of the

target file, the selection being transmitted in the

form of a request for transfer of the user-selected

version of the target file.

40.   The client computer of claim 39 wherein the program
for generating a menu at the client is generated from menu
generation information stored at the client upon initiation of
a request for transfer of a target file.

5   41.   The client computer of claim 40 wherein the menu
generation information is transmitted to the client computer
from another computer interconnected to the client computer by
a communications network.

10   42.   A computer for satisfying a request for a user-
selected version of a target file not materialized on the
computer, the computer comprising:
          a program requesting from another computer a
          materialized parent version of the target file from
15   which the user-selected version can be derived if
          such a version is not stored on the computer;
          a computer program for deriving the user-selected
          version from the parent version by conversion; and
          a computer program for transmitting the user-
20   selected version in response to the request.

43.   The computer of claim 42 wherein the computer is a
server.

44.   The computer of claim 43 wherein the computer is a
proxy.

45.   The computer of claim 44 wherein the proxy comprises
a program for transmitting menu-generation information to a
client along with a communication transmitted from the proxy
to the client.

5   46.   The computer of claim 45 wherein the proxy further
comprises a memory cache for storing files.

47.   The computer of claim 46 wherein the proxy further
comprises:

        a program for determining whether the user-selected
10   version is derivable from a parent version resident
        in the cache; and
        a program for deriving the user-selected version
        from a parent version resident in the cache.

15   48.   A computer comprising:
        a program for deriving by conversion a user-selected
        version of a target file, upon receipt of a request
        for transmission of the user-selected version;
        a program for requesting from a server a parent
20   version from which the user-selected version may be
        derived if such a version is not resident at the
        computer; and
        a program for transmitting the user-selected version
        responsive to the request.

49. The computer of claim 48, further comprising:

a program for transmitting menu-generation program
to the client, the menu generation program being
capable of generating a menu of user-selectable

5   version of the target file;

a program for transmitting a request for a

materialized version; and

a program for transmitting the user-selected

version.